



ARBOR VITAE

ECOLOGY • FORESTRY • LAND USE



PRELIMINARY ECOLOGICAL APPRAISAL & BIODIVERSITY NET GAIN

Project name: Lythwood Sports Complex, Bayston Hill, Shrewsbury

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1 INTRODUCTION

1.1 BACKGROUND TO DEVELOPMENT

Planning permission will be sought for the extension of an existing clubhouse and car parking area at Lythwood Sports Complex, Bayston Hill.

Arbor Vitae were commissioned by Creative Planning to undertake an Ecological Impact Assessment, to include Biodiversity Net Gain, in order to assess the impact of the development on habitats and protected species.

1.2 SCOPE OF SURVEY

The survey is primarily designed to:

- Identify and record habitats and important ecological features on site;
- Evaluate the potential of the proposed development site to provide opportunities for protected species;
- Determine any likely impact which the development and landscape proposals may have on these.
- Assess baseline habitats on site at the time of the survey,
- Provide relative condition assessment of each habitat parcel present,
- Provide an accurate habitat map of the site,
- Complete Biodiversity Net Gain Metric baseline and, where possible, 'habitat creation' for areas, hedges and rivers (where applicable).

1.3 KEY PRINCIPLES

All ecological surveys conducted by Arbor Vitae Environment Ltd are underpinned by the following key principles, as outlined by CIEEM (2018):

Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).

Mitigation - Adverse effects should be avoided or minimized through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed – for example, through a condition or planning obligation.

Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.

Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.

2 SITE DESCRIPTION

2.1 LOCATION, LANDSCAPE, AND BACKGROUND

Lythwood Sports Complex is located just south of Lythwood Road, to the west of Bayston Hill. Land to the east of the site is dominated by existing residential development, and all associated infrastructure. To the north of the site are a series of sports pitches, eventually bordered by broadleaved woodland which forms a semi-circle around the north and west of the wider site. Land to the south includes extensive arable fields and allotments.

The plans will include an extension to the sports club, and increased parking capacity on site.

3 SURVEY METHODOLOGY

3.1 DESK STUDY

An initial desk study was composed to gain background information regarding any protected species or designations within the area. The main sources of information were MagicMap, Shropshire Environmental Network and NBN Atlas.

3.2 SITE SURVEY

A site visit was made on 28/05/2024. The survey was carried out in accordance with CIEEM (2017) best practice guidelines. The objective of the survey was to find and record any signs of use by protected species and to note the habitat features present.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected species:

- Badger
- Bats
- Breeding birds
- Great Crested Newt

The survey methodology was tailored to evaluate the area for these species in the following ways:

Badger

An area within 50 metres of the site was closely searched for the following signs of badger activity:

- Setts,

- Tracks and footprints,
- Latrines,
- Snuffle holes.

Bats

The objective of the survey was to find and record any signs of use by bats, for example:

- Droppings, sometimes in concentrations below roost sites
- Feeding signs such as butterfly and moth wings
- Staining of timber, brickwork around access points

The general structure of the building was assessed for its potential to provide bats with roosting opportunities.

The site was assessed in terms of its suitability to support bat species. Hedgerow habitat and nearby potential habitat were assessed and recorded and potential impacts from the proposals considered.

Breeding birds

The site was assessed in terms of its suitability to support breeding bird populations. Hedgerow habitat and nearby potential habitat were assessed and recorded.

Great crested newt

A desk study and a ground search were conducted to search for any areas of open water within 250 metres. Waterbodies were then assessed based on the Habitat Suitability Index for great crested newts (Oldham et al., 2000 and ARG UK, 2010).

3.3 PERSONNEL

The survey was carried out by Phillipa Stirling MSc ACIEEM: Ecologist.

Natural England bat Level 1 licence number: 2021-52205-CLS-CLS, GCN Level 1 licence number: 2019-42631-CLS-CLS, hazel dormouse Level 1 licence number: 2023-11248-CL10A-DOR.

3.5 CONSTRAINTS

Access into the existing clubhouse was not possible at the time of the survey but external inspection revealed that the structure is unsuitable for use by protected species.

4 SURVEY RESULTS

4.1 DESK STUDY

The desk study found that within 1km of the site there were the following designations:

Name	Designation	Distance from site
Weir Coppice	Local Wildlife Site	1000m
The search included Ramsar, SSSI, SAC, SPA, LWS, NNR and LNR. ¹		

Results from the desk study revealed that within a 1km radius of the proposed development site the following protected species have been recorded:

Species	Distance	Protection
Mammals		
Otter	0.9km	European Protected Species, Wildlife and Countryside Act 1981.
Badger	0.7km	Protection of Badgers Act 1992, Wildlife and Countryside Act 1981.
Birds		
Kingfisher Kestrel Brambling Redwing Fieldfare Barn owl	0.2-1km	Wildlife and Countryside Act 1981.

4.2 HABITATS ON SITE

All habitats are classified using broad UKHab definitions.

Developed land/sealed surface

Areas of developed land account for just over 2000m² of the site area. This includes car parking, paving, and the existing structures on site.

¹ SSSI: Site of Special Scientific Interest, SAC: Special Area of Conservation, SPA: Special Protection Area, LWS: Local Wildlife Site NNR: National Nature Reserve, LNR: Local Nature Reserve.

The existing clubhouse is a relatively new single storey brick structure, with a hipped concrete tiled roof above. The pitch of the roof is shallow, and the valleys are all lined with lead flashing. The brickwork is in good condition, and the structure is surrounded by concrete paths and gravelled drainage.

The eaves of the structure extend out by around 500mm and are sealed with PVC soffits, glued in place. The ridge tiles are cemented in place and there are solar panels on the south facing side of the building.

There are several storage containers to the south of the site, used for sports equipment.

Vegetated garden

The grassland which is present on site resembles amenity grassland most closely. The areas are routinely cut, and the species are hardy lawn varieties such as dwarf rye, Italian rye, annual meadow grass, common bent, common daisy, creeping buttercup, white clover, ribwort plantain, and self-heal.

Broadleaved woodland

A corridor of planted woodland lies along the north east boundary of the site. The area is mostly unmanaged, and dominated by sycamore and white poplar, with small leaved lime, field maple, ash, holly, goat willow, and Guelder rose also recorded. The ground flora is poorly developed, and dominated by nettle and cow parsley. Cotoneaster shrubs are present throughout.

4.3 ADJACENT HABITATS

The land surrounding the site is dominated by recreational sports use.

4.4 PROTECTED SPECIES

Badger

During the site inspection, no evidence of badger was found on or adjacent to the site.

Bats

The site does not offer any suitable potential roosting features for bat species and the club house/storage containers were not suitable for use by bats.

The woodland parcels around the site may provide foraging and commuting opportunities for bat species, although the dense residential development to the east and flood lighting likely reduces the amount of bat activity on site.

Breeding birds

At the time of the survey, there was no evidence of breeding birds in association with the buildings on site, the areas of grassland, or areas of hardstanding. The small areas of woodland around the edges of the site may provide nest sites for breeding birds through the spring and summer months.

Great Crested Newt

There are no ponds present within 250m of the site and therefore no further survey work with regard to GCN was carried out.

5 POTENTIAL ECOLOGICAL IMPACT

5.1 HABITAT ASSESSMENT

Developed land/sealed surface

The existing areas of developed land will be retained, and the habitat type will be increased overall.

Vegetated garden

Areas of amenity grassland will be lost for the creation of parking areas, club house, and paving. The loss of this habitat is of limited consequence at a local scale.

Broadleaved woodland

Approximately 250m² of broadleaved woodland will be removed from the east boundary of the site to accommodate the new parking areas. The woodland is in poor condition currently but will nevertheless require mitigation and compensation.

5.2 PROTECTED SPECIES ASSESSMENT

Badger

The proposals will have no impact upon badger, their foraging areas, or setts. No further survey work is required.

Bats

There are no habitats within the red line boundary which provide suitable roosting sites for bat species. The planted woodland areas around the site are relatively young, and trees within the parcels do not appear to provide natural roosting opportunities.

The eastern edge of the site will retain a complete corridor of woodland, and will therefore continue to provide a linear landscape feature. Plans for the creation of new woodland parcels will off-set the loss of any foraging/commuting habitat on site.

The construction or operational phase of the development will have no impact upon bat species and no further survey work or mitigation is required.

Breeding birds

The removal of a small area of woodland from the east boundary has the potential to disturb breeding birds, if present. This will require mitigation and replacement nesting sites will be required.

Great crested newt

There are no records of GCN within 1km nor suitable ponds within 250m of the site. The proposals will have no impact upon this species and no further survey work or mitigation is required.

6 AVOIDANCE, MITIGATION AND ENHANCEMENT

6.1 HABITAT MITIGATION

The baseline habitat units provided at the site is 0.8868. The post-intervention habitat units provided is 1.0087, which equates to a 13.74% net gain.

This will be achieved through the retention of woodland and amenity grassland where possible, the creation of 200m² of new native woodland parcels on site, enhancement of retained woodland along the east edge, and the planting of 7 standard trees around the site.

There are no hedgerow or watercourse units present at the site.

6.2 PROTECTED SPECIES MITIGATION

Breeding birds

All tree clearance from the site will take place between October and February of a given time period. All material arising from the works will be cleared from site prior to the start of the breeding season from 1st March.

A minimum of 5 Woodcrete nest boxes will be installed into trees to be retained along the east boundary, upon completion of clearance work.

General Avoidance Measures

The following measures should be implemented to decrease the likelihood of killing/injuring small animals which may be present:

- If piles of rubble, logs, bricks, other loose materials or other potential refuges are to be disturbed, this should be done by hand and carried out during the active season (March to October) when the weather is warm to allow animals to disperse naturally.
- The grassland areas should be kept short prior to and during construction to avoid creating attractive habitats for wildlife.
- All building materials, rubble, bricks and soil must be stored on raised platform (e.g. wooden pallets) to prevent their use as refuges by wildlife.
- Where possible, trenches should be opened and closed in the same day to prevent any wildlife becoming trapped. If it is necessary to leave a trench open overnight then it should be provided with a means of escape in the form of a shallow ramp.
- Any open pipework should be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal is trapped.
- Any common reptiles or amphibians discovered should be allowed to naturally disperse. Advice should be sought from an appropriately qualified and experienced ecologist if large numbers of common reptiles or amphibians are present.
- If a great crested newt is discovered at any stage then all work must immediately halt and an appropriately qualified and experienced ecologist and Natural England (0300 060 3900) should be contacted for advice.

6.3 ECOLOGICAL ENHANCEMENT

A net gain in biodiversity at the site will be achieved through the following means:

- Creation of 200m² of native broadleaved woodland,
- Enhancement of 474m² of retained woodland on site,
- Planting of 7 standard native trees, to reach 'medium' size by the end of the 30-year BNG term.

Additional features to be included in the scheme are:

- 2x Woodcrete multi-chamber bat boxes to be installed into the woodland parcel to the west of the site. The boxes will be installed at least 3m from ground level, with a clear flight path into them.

7 SUMMARY

Planning permission will be sought for the extension of an existing clubhouse and car parking area at Lythwood Sports Complex, Bayston Hill. Arbor Vitae were commissioned by Creative Planning to undertake an Ecological Impact Assessment, to include Biodiversity Net Gain, in order to assess the impact of the development on habitats and protected species.

The proposals will have no impact upon badger, their foraging areas, or setts.

There are no habitats within the red line boundary which provide suitable roosting sites for bat species. The planted woodland areas around the site are relatively young, and trees within the parcels do not appear to provide natural roosting opportunities.

The removal of a small area of woodland from the east boundary has the potential to disturb breeding birds, if present. This will require mitigation and replacement nesting sites will be required.

There are no records of GCN within 1km nor suitable ponds within 250m of the site. The proposals will have no impact upon this species and no further survey work or mitigation is required.

The baseline habitat units provided at the site is 0.8868. The post-intervention habitat units provided is 1.0087, which equates to a 13.74% net gain.

This will be achieved through the retention of woodland and amenity grassland where possible, the creation of 200m² of new native woodland parcels on site, enhancement of retained woodland along the east edge, and the planting of 7 standard trees around the site.

Additional features to be included in the scheme are:

- 2x Woodcrete multi-chamber bat boxes to be installed into the woodland parcel

8 REFERENCES

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FIGURE 1 LOCATION

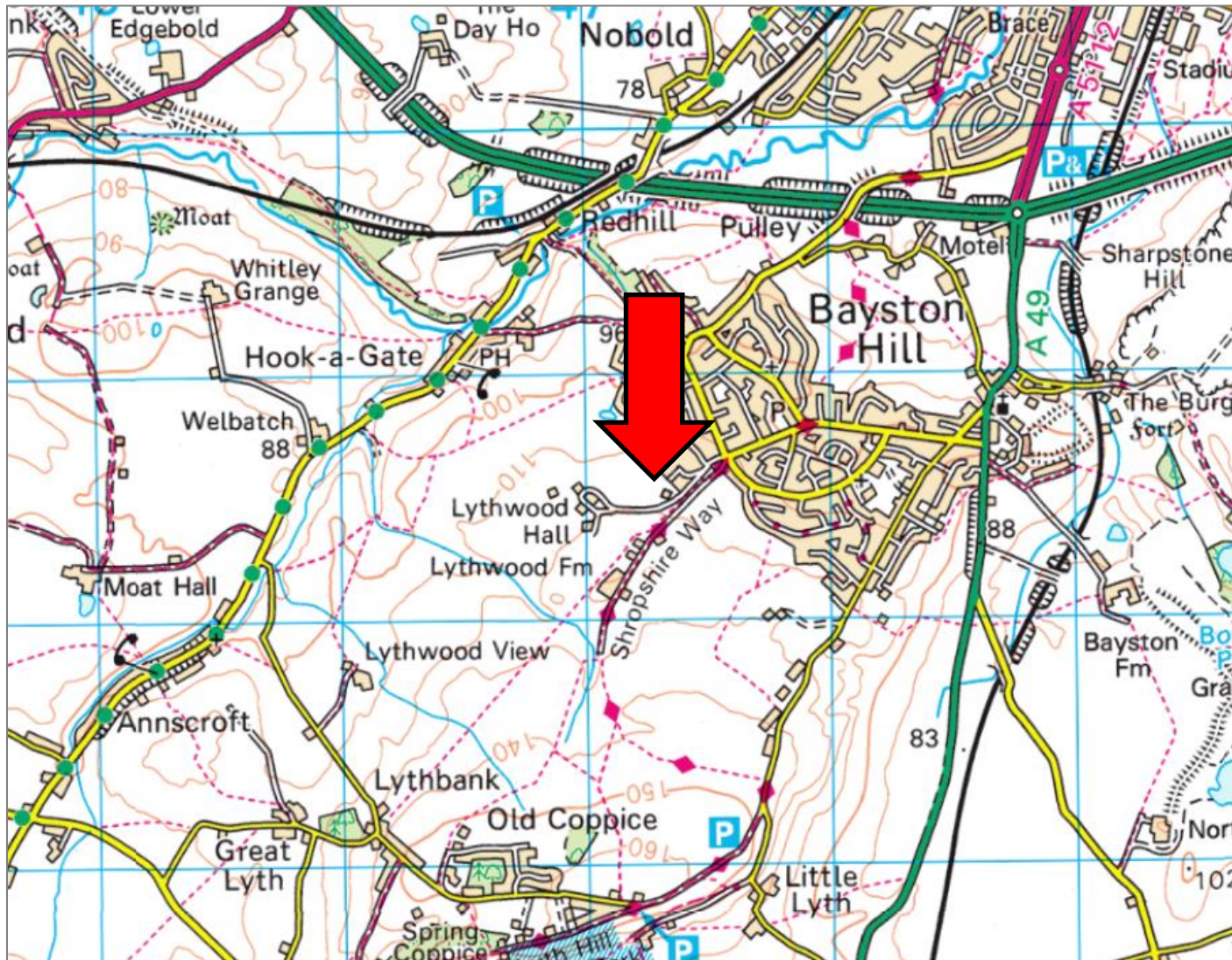


FIGURE 2 AERIAL PHOTOGRAPH



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FIGURE 3 ON-SITE HABITAT BASELINE

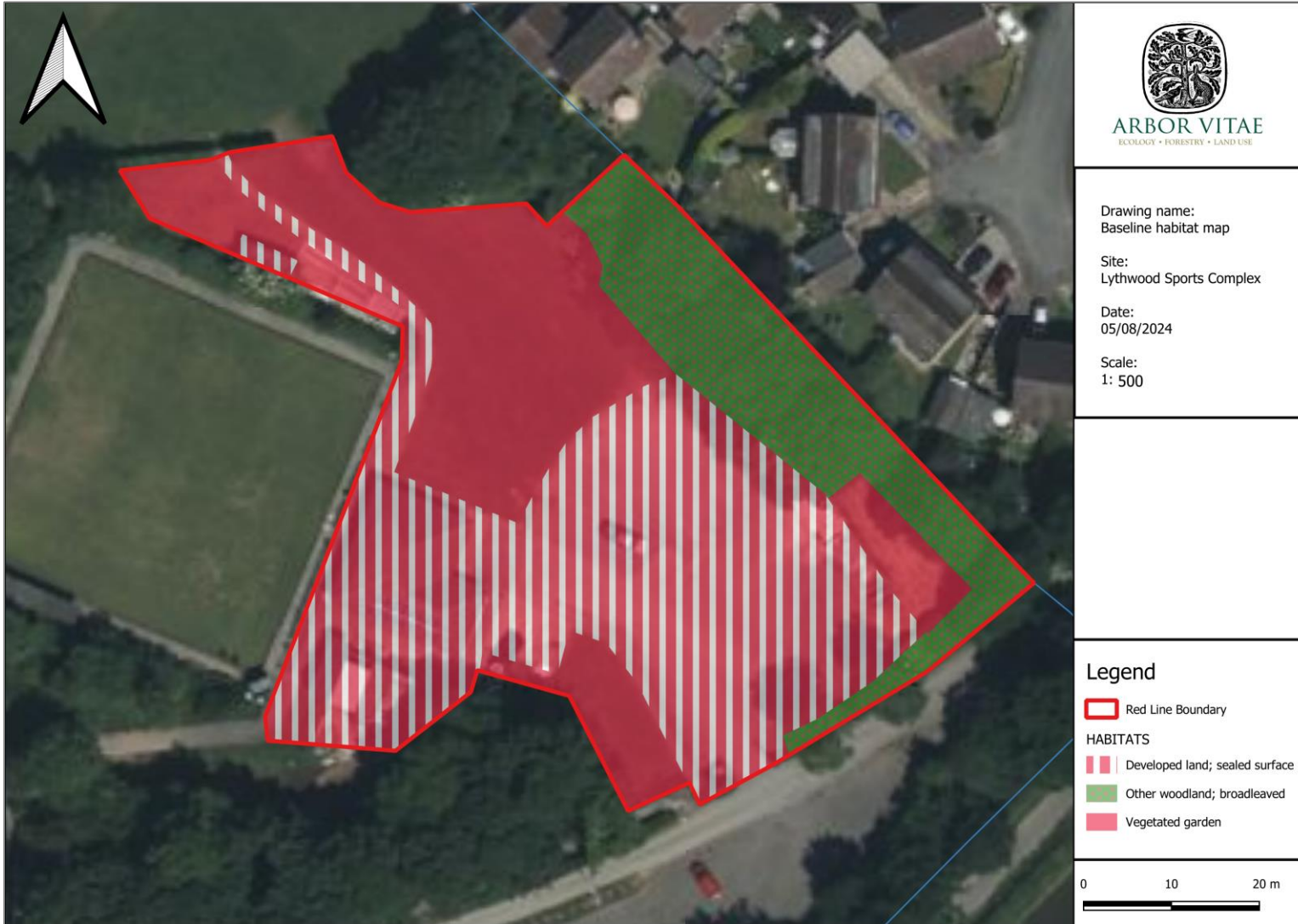


FIGURE 4 ON-SITE HABITAT PROPOSED



FIGURE 5 PROPOSED SITE PLAN



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APPENDIX 1 PHOTOGRAPHS



Car park



Amenity grassland



Woodland to east



Clubhouse



Woodland structure



General site conditions

